

Amendments to the Claims/Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A system for cutting a bone at a desired location, including:
a drill cylinder having a body that defines a central bore, and an element configured to be detected by an image guidance system to permit image guidance of the drill cylinder to a target location on the bone; and

a cutting block having

a frame,

a first guide adjustably connected to the frame,

a first adjustor connected to the frame, and

a first mounting location defined by the frame and configured to attach to the bone at the target location,

the first guide defining a first cutting path having a position, the position of the first cutting path relative to the first mounting location being adjustable linearly using a grip of the first adjustor,

a second guide spaced apart from the first guide by a first distance, the second guide being adjustably connected to the frame, and

a second adjustor connected to the frame,

the second guide defining a second cutting path having a position, the position of the second cutting path relative to the first cutting path being independently adjustable and the position of the second cutting path relative to the first mounting location being adjustable angularly using a grip of the second adjustor, and

a third guide spaced apart from the second guide by a second distance and disposed adjacent to and independent thereof, the third guide being adjustably connected to the frame, ~~the third guide disposed adjacent to the second guide and independent thereof,~~ and

a third adjustor connected to the frame, the third guide defining a third cutting path having a position, the position of the third cutting path being adjustable using a grip of the third adjustor, being independently adjustable both angularly and linearly with respect to the first cutting path and the second cutting path, ~~angularly adjustable with respect to the second cutting path, and angularly adjustable with respect to the first mounting location;~~

wherein the spaces between the guides as defined by the first and second distances are independently adjustable with respect to one another.

2. (Original) The system of claim 1, wherein the drill cylinder includes a handle connected to the body and configured to permit manual positioning of the body.

3. (Original) The system of claim 1, wherein the drill cylinder includes an array of elements configured to be detected by the image guidance system.

4. (Original) The system of claim 1, wherein the cutting block frame includes a plurality of channels configured to support the first guide and accommodate movement of the first guide during adjustment of the first cutting path.

5. (Original) The system of claim 1, wherein the first guide includes a pair of substantially parallel guide walls extending between a pair of end portions, the guide walls and the end portions defining the first cutting path.

6. (Original) The system of claim 1, wherein the first mounting location includes a bore defined by the frame.

7. (Original) The system of claim 1, wherein the frame defines a second mounting location, the first mounting location and the second mounting location being located on an attachment wall of the frame.

8. (Previously Presented) The system of claim 1, wherein the frame further includes a mounting plate coupled to the frame to accommodate linear adjustment of the position of the second cutting path.

9. (Previously Presented) The system of claim 8, wherein the mounting plate is further configured to accommodate angular adjustment of the second cutting path.

10. (Previously Presented) The system of claim 9, wherein the mounting plate includes an arcuate channel for supporting a post connected to the second guide, the arcuate channel defining a path of angular adjustment of the second cutting path.

11. (Previously Presented) The system of claim 1, wherein the position of the second cutting path relative to the first mounting location is adjustable linearly.

12. (Original) The system of claim 11, wherein the position of the second cutting path relative to the first mounting location is adjustable using a second grip of the first adjustor.

13-15. (Cancelled)

16. (Original) The system of claim 1, wherein the frame includes a first end wall, a second end wall, a first side wall extending between the end walls, and a second side wall extending between the end walls.

17. (Original) The system of claim 16, wherein the first guide is connected between the side walls adjacent the first end wall.

18. (Previously Presented) The system of claim 17, wherein the second guide is adjustably connected to the frame between the side walls.

19. (Previously Presented) The system of claim 18, wherein the third guide is adjustably connected to the frame between the side walls.

20. (Original) The system of claim 19, wherein the cutting block further includes a fourth guide defining a fourth cutting path, the fourth guide being adjustably connected to the frame between the side walls adjacent the second end wall.

21. (Original) The system of claim 20, wherein the second guide and the third guide are positioned between the first guide and the fourth guide.

22. (Original) The system of claim 21, wherein the second guide is positioned between the first guide and the first mounting location and the third guide is positioned between the fourth guide and the first mounting location.

23. (Original) The system of claim 1, wherein the position of first guide is adjustable linearly relative to the first mounting location using the first adjustor.

24. (Previously Presented) The system of claim 20, wherein the cutting block further

includes a fourth adjustor, the first guide and the second guide being adjustable linearly relative to the first mounting location using the first adjustor, the third guide and the fourth guide being adjustable linearly relative to the first mounting location using the third adjustor, and the third guide being adjustable angularly relative to the first mounting location using the fourth adjustor.

25. (Original) The system of claim 1, further including a tracking instrument having an engagement portion and an element configured to be detected by the image guidance system to permit image guidance of adjustments of the first cutting path relative to the first mounting location when the engagement portion is placed in engagement with the first cutting path.

26. (Original) The system of claim 25, wherein the tracking instrument includes a plurality of elements configured to be detected by the image guidance system.

27. (Original) The system of claim 25, wherein the engagement portion includes a plate configured to fit within the first cutting path.

28. (Original) The system of claim 25, wherein the engagement portion includes a tip positioned at an end of the tracking instrument that is substantially opposite the element.

29. (Currently Amended) A system for locating a planar cut through a portion of a bone, including:

- an image guided drill cylinder having a body that defines a central bore configured to receive one of a drill bit and a pin, and a tracking element coupled to the body;

- a receiver configured to sense a present location of the tracking element and provide location signals representing the present location of the tracking element;

- a processor coupled to the receiver, the processor being configured to receive the location signals and to determine, based upon the location signals and data representing a target location on the bone, a present location of the central bore relative to the target location;

- a display coupled to the processor, the display being configured to generate images representing the present location of the central bore relative to the target location so that the drill cylinder may be moved until the present location of the central bore registers with the target location; and

- a cutting block having a frame including a first mounting location configured to connect the cutting block to the bone at the target location, a first guide adjustably mounted to the frame

for movement relative to the first mounting location, the first guide defining a first cutting path adapted to guide a saw for creating the planar cut when the first guide is adjusted such that the first cutting path is in a position corresponding to the planar cut, a second guide spaced apart from the first guide by a first distance and defining a second cutting path having a position, the position of the second cutting path relative to the first mounting location being adjustable angularly and linearly with respect to the first cutting path, and a third guide spaced apart from the second guide by a second distance and adjacent the second guide and independent of the first and the second guides, the third guide defining a third cutting path angularly adjustable with respect to the first guide and the second guide;

wherein the spaces between the guides as defined by the first and second distances are independently adjustable with respect to one another.

30. (Original) The system of claim 29, wherein the cutting block frame includes a pair of channels positioned to support the first guide during adjustment of the first cutting path.

31. (Original) The system of claim 29, wherein the first guide includes a pair of guide walls substantially defining the first cutting path.

32. (Original) The system of claim 29, wherein the frame defines a second mounting location, the first mounting location and the second mounting locations being located on an attachment wall of the frame.

33. (Previously Presented) The system of claim 29, wherein the frame further includes a mounting plate coupled to the frame to accommodate linear adjustment of the position of the second cutting path.

34. (Previously Presented) The system of claim 33, wherein the mounting plate is further configured to accommodate angular adjustment of the second cutting path.

35. (Cancelled)

36. (Previously Presented) The system of claim 29, wherein the cutting block further includes a second adjustor having a grip, use of the second adjustor grip causing angular adjustment of the position of the second cutting path.

37. (Previously Presented) The system of claim 29, wherein the cutting block further includes a fourth guide defining a fourth cutting path, the fourth guide being adjustably connected to the frame.

38. (Original) The system of claim 37, wherein the second guide is positioned between the first guide and the first mounting location and the third guide is positioned between the fourth guide and the first mounting location.

39. (Original) The system of claim 37, wherein the first guide is adjustable linearly relative to the first mounting location using a first adjuster having a grip.

40. (Original) The system of claim 39, wherein the cutting block further includes a second adjuster, a third adjuster, and a fourth adjuster, the first guide and the second guide being adjustable linearly relative to the first mounting location using the first adjuster, the second guide being adjustable angularly relative to the first mounting location using the second adjuster, the third guide and the fourth guide being adjustable linearly relative to the first mounting location using the third adjuster, and the third guide being adjustable angularly relative to the first mounting location using the fourth adjuster.

41. (Original) The system of claim 29, further including a tracking instrument having an engagement portion and an element configured to be detected by the receiver to permit image guidance of adjustments of the first cutting path relative to the first mounting location when the engagement portion is placed in engagement with the first cutting path.

42. (Original) The system of claim 41, wherein the engagement portion includes a plate configured to fit within the first cutting path.

43-59. (Cancelled)

60. (Currently Amended) A cutting block configured to guide a cutting instrument during a bone cutting procedure, including:

- a frame;

- a first mounting location defined by a portion of the frame;

- a first guide coupled to the frame, the first guide including a first surface defining a first cutting path;

a second guide spaced apart from the first guide by a first distance and coupled to the frame, the second guide including a second surface defining a second cutting path;

a first adjustor coupled to the first guide, the first adjustor including a first grip configured to permit a user to linearly actuate the first adjustor, thereby causing linear movement of at least a portion of the first cutting path relative to the first mounting location;

a second adjustor coupled to the second guide, the second adjustor including a first grip configured to permit a user to angularly actuate the second adjustor, thereby causing angular movement of the second cutting path relative to the first mounting location and to the first guide;

a third guide spaced apart from the second guide by a second distance and coupled to the frame, the third guide including a third surface defining a third cutting path and being independent of the first guide and the second guide; and

a third adjustor coupled to the third guide, the third adjustor including a first grip configured to permit a user to linearly actuate the third adjustor thereby causing linear movement of at least a portion of the third cutting path relative to the first mounting location;

wherein the spaces between the guides as defined by the first and second distances are independently adjustable with respect to one another.

61. (Previously Presented) The cutting block of claim 60, wherein the frame includes a first pair of channels configured to support the first guide and accommodate movement of the first guide during adjustment of the first cutting path, and a second pair of channels configured to support the second guide and accommodate movement of the second guide during adjustment of the second cutting path.

62. (Previously Presented) The cutting block of claim 60, wherein the first guide includes a guide wall extending between a pair of end portions, the first surface being disposed on the guide wall.

63. (Previously Presented) The cutting block of claim 60, wherein the frame defines a second mounting location, the first mounting location and the second mounting locations being located on an attachment wall of the frame.

64. (Previously Presented) The cutting block of claim 60, wherein the frame further includes a mounting plate coupled to the frame to accommodate linear adjustment of the position

of the second cutting path relative to the first mounting location.

65. (Previously Presented) The cutting block of claim 64, wherein the mounting plate includes an arcuate channel configured to accommodate angular adjustment of the second cutting path.

66. (Previously Presented) The cutting block of claim 60, wherein the position of the second cutting path relative to the first mounting location is adjustable using a second grip of the first adjustor.

67. (Previously Presented) The cutting block of claim 66, wherein use of the second grip causes linear adjustment of the position of the second cutting path.

68. (Previously Presented) The cutting block of claim 60, wherein the frame includes a first end wall, a second end wall, and a pair of substantially parallel side walls extending between the end walls.

69. (Previously Presented) The cutting block of claim 68, wherein the third guide is adjustably connected to the frame between the side walls.

70. (Previously Presented) The cutting block of claim 69, wherein the cutting block further includes a fourth guide defining a fourth cutting path, the fourth guide being adjustably connected to the frame between the side walls adjacent the second end wall.

71. (Previously Presented) The cutting block of claim 70, wherein the second guide is positioned between the first guide and the first mounting location and the third guide is positioned between the fourth guide and the first mounting location.

72. (Currently Amended) A system for cutting a bone at a desired location, including:
a drill;
an element attached to the drill and configured to be detected by an image guidance system to permit image guidance of a drill bit connected to the drill to a target location on the bone; and
a cutting block having
a frame,

a first guide adjustably connected to the frame,
a first adjustor connected to the frame,
a first mounting location defined by the frame and configured to attach to the bone at the target location,

the first guide defining a first cutting path having a position, the position of the first cutting path relative to the first mounting location being adjustable linearly using a grip of the first adjustor,

a second guide spaced apart from the first guide by a first distance, the second guide being adjustably connected to the frame and independent of the first guide,

a second adjustor connected to the frame,

the second guide defining a second cutting path having a position, the position of the second cutting path relative to the first mounting location being adjustable angularly using a grip of the second adjustor and linearly using the first guide, and

a third guide spaced apart from the second guide by a second distance and adjustably connected to the frame and independent of the first guide and the second guide,

a third adjustor connected to the frame,

a fourth adjustor connected to the frame,

the third guide defining a third cutting path having a position, the position of the third cutting path relative to the first mounting location being adjustable angularly using a grip of the fourth adjustor and linearly using a grip of the third adjustor;

wherein the spaces between the guides as defined by the first and second distances are independently adjustable with respect to one another.

73. (Currently Amended) A system for locating a plurality of planar cuts through a bone, including:

means for image guiding a drill to create a bore in a target location of the bone;

means for providing first, second, and third cutting paths to guide a saw for creating the plurality of planar cuts;

means for mounting the providing means to the bone at the target location;

means for image guiding the providing means; and

means for adjusting a position of the providing means relative to the mounting means, the means for adjusting including a means to adjust the first cutting path linearly, the second cutting

path angularly and linearly, and the third cutting path angularly and linearly, wherein each of the means to adjust the first cutting path, the second cutting path and the third cutting path can be adjusted independently of each of the other means to adjust;

wherein the providing means includes first, second and third guides, the second guide being spaced apart from the first guide by a first distance and the third guide being spaced apart from the second guide by a second distance and wherein the spaces between the guides, as defined by the first and second distances, are independently adjustable with respect to one another.